



Overview of Mixed Methods Research in Dissemination and Implementation

John W. Creswell, Professor of Educational Psychology, University of Nebraska-Lincoln
Jennifer P. Wisdom, Associate Professor of Clinical Psychology, Columbia University
Mailman School of Public Health

Presentation for NIH Workshop: Using Mixed Methods to Optimize Dissemination and Implementation of Health Interventions, May 3, 2012, Natcher Conference Center, NIH Campus, Bethesda, MD



What topics will be addressed in this workshop?

- An introduction to mixed methods
 - Mixed methods in dissemination/implementation research
 - Examples of D&I mixed methods projects
 - Qualitative research into interventions
 - Integration
 - Quality practices
-
- Overall intent: to bridge the fields of dissemination/implementation health science research with mixed methods research

Origins

- From separate strands to integration
- Founding period in social sciences/health
- Why it developed

Practical Applications

- Examples of “good” studies
- Teamwork
- Discipline adaptations
- Country adaptations
- Quality practices
- Skills and knowledge required

Definitions

- Key characteristics
- Assumptions and name
- Types of methods
- Types of designs
- Results from designs
- Purposes (rationale for)

Conceptual/Theoretical Developments

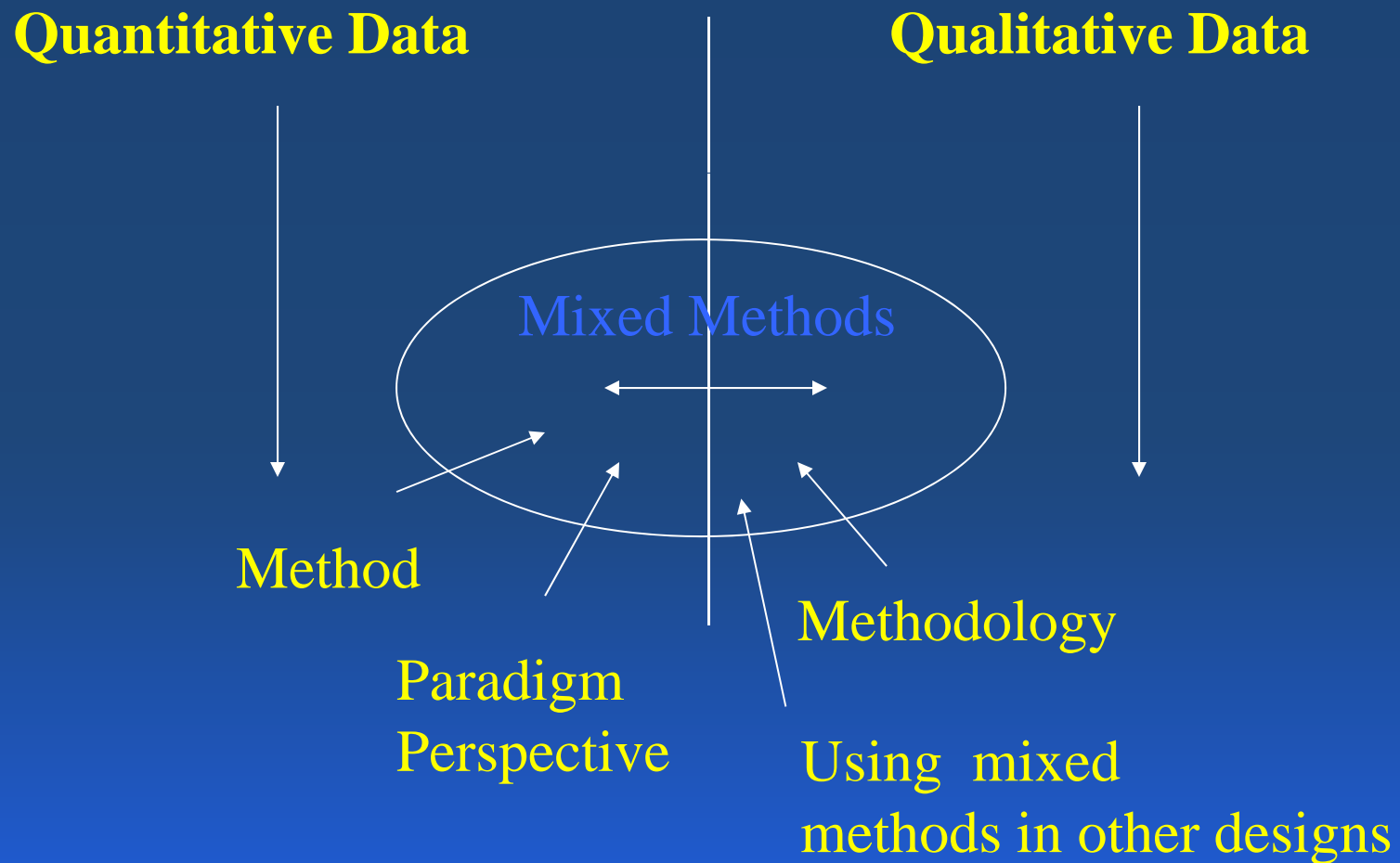
- Philosophical paradigms/worldviews
- Transformative theory use
- Social science theory use
- Ethical issues

Technical Developments in Designs

- Types
- Notation
- Diagrams (figures)
- Detailed procedures
- Integration
- Mixed methods questions/study aims
- Validity
- Computer software

Figure 1. Introducing Mixed Methods Research

What is mixed methods research? And what perspectives have emerged?



When did mixed methods develop in the social sciences and health/behavioral sciences? (1985-90)

Jennifer Greene – USA- University of Illinois – evaluator

John Hunter and Allen Brewer – USA - Northwestern and Boston College – sociologists

Alan Bryman - England – management

John Creswell – USA – education

Nigel and Jane Fielding – sociologist in UK

Jan Morse – nursing in Canada



Why did it develop?

- Acceptance of qualitative research in US
- Recognition that both quan and qual have strengths that can be combined
- Complexity of issues that require both trends and context
- Formation of interdisciplinary teams with diverse methodology
- Intuitive nature of mixed methods in media and practice
 - Soccer game
 - CNN
 - Documentaries
 - Titanic
 - Provider-patient interactions

What is mixed methods research? (Creswell's six key characteristics)

- The collection of both qualitative and quantitative data (open- and closed-ended) in response to research questions
- The analysis of both qualitative and quantitative data
- Persuasive and rigorous procedures for the qualitative and quantitative methods
- The integration of these two data sources (merging, connecting, embedding)
- The use of a specific mixed methods design that involves a concurrent or sequential integration (and equal or unequal emphases)
- An approach to research that can include a philosophical foundation or theoretical orientation

What assumptions are central to mixed methods research?

- Quantitative data and data collection tend to differ from qualitative data and data collection
- Quantitative data is collected to answer certain types of questions (probable cause-effect, group comparisons) and qualitative data is collected to answer other types of questions (explore, discern the meaning of participants)
- Quantitative research and qualitative research have both strengths and weaknesses
- Mixed methods combines the strengths of both quantitative and qualitative research. Quantitative or qualitative research, each by itself, is insufficient to understand our research problems



What names are used for mixed methods research in the health sciences?

- In the health science literature under different names
 - Multi-methods research
 - Quantitative and qualitative research
 - Focus group interviews and experiments
 - Mixed methods

What “methods” are associated with quantitative and qualitative research?

- Quantitative

- Instrument measures
- Observations
- Records

Numeric data
(closed-ended
with pre-determined
scales)

- Qualitative

- Interviews
- Observations
- Documents
- Audiovisual materials

Text or image data
(open-ended without
pre-determined response
scales)

What “research designs” are associated with quantitative and qualitative research?

■ Quantitative methods

- Descriptive/case series
- Case-controlled
- Cross-sectional
- Retrospective cohort
- Meta-analyses
- Systematic reviews
- RCTs
- Non-randomized
- Trials with self-controls
- Crossover studies
- Uncontrolled studies

■ Qualitative methods

- Case studies
- Grounded theory
- Phenomenology
- Ethnographies
- Narrative studies
- Participatory action studies
- Conversational analysis studies

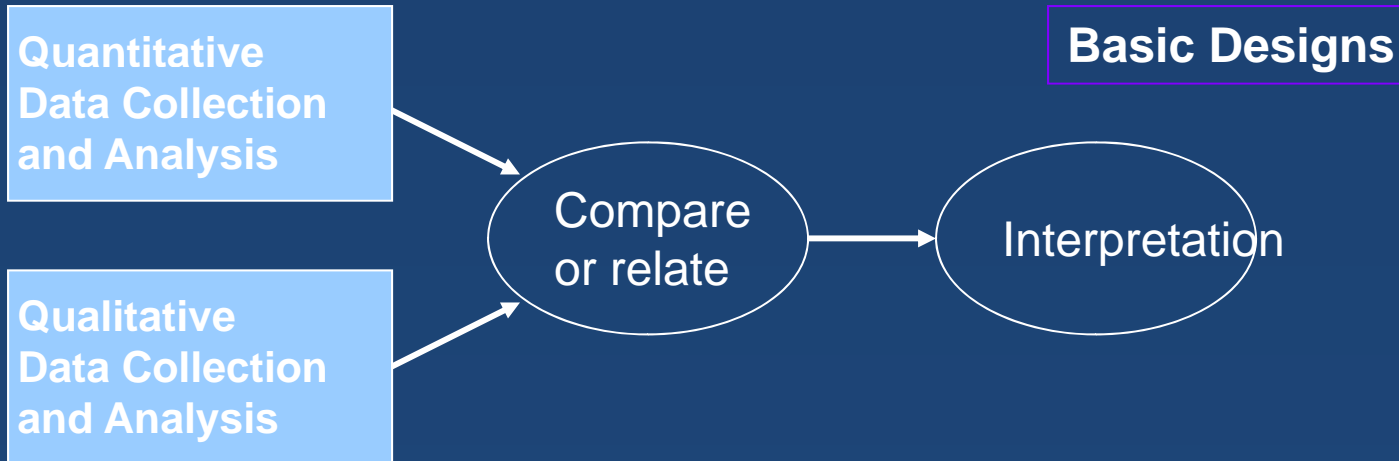
What types of results do we hope to attain with quantitative and qualitative methods?

- Quantitative methods
 - Trends, graphs, statistics
 - Cause-and-effect (factors that influence)
 - Group comparisons
 - Theory-driven
 - Valid, reliable, generalizable
- Qualitative methods
 - Individual stories
 - Different perspectives
 - Complexity of situation
 - Process understandings
 - Context or settings
 - Inductively-developed theory
 - Persuasive, individual, realistic, contextual

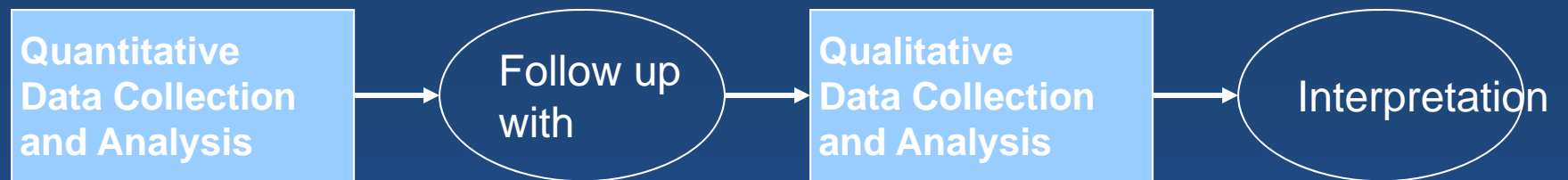
What is the purpose (rationale) for mixed methods research?

- Do mechanisms actually work and what explains them? (use qual to follow up quan) **explanation purpose**
- Does instrument data and interview data converge? (combine quan and qual results) **validity purpose**
- Will an instrument work with a sample of a population? (qual followed by quan instrument development and testing) **instrument design purpose**
- Will what participants experience as outcomes in an intervention actually resonate with their experiences with the process? (embed qual data into an intervention trial) **explain both the process and outcomes purpose**
- What program will work with a group, how does it work, and why does it work? (qual data collection, quan data collection, qual data collection) **program/intervention evaluation purpose**

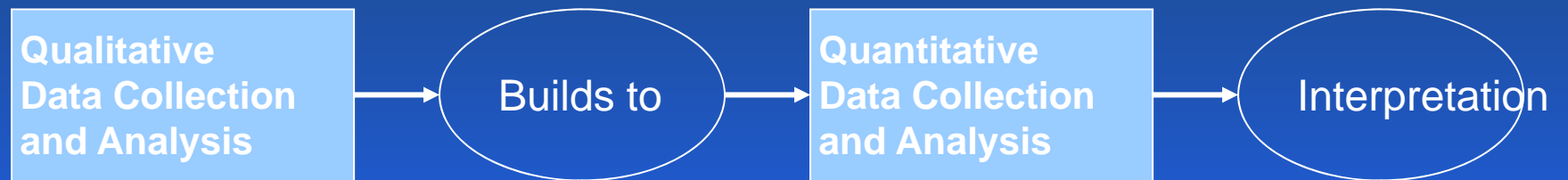
Convergent Parallel Design What are the design options?



Explanatory Sequential Design



Exploratory Sequential Design



Embedded Design

Quantitative (or Qualitative) Design
Quantitative (or Qualitative)
Data Collection and Analysis

Qualitative (or Quantitative)
Data Collection and Analysis
(before, during, or after)

Interpretation

Design Options (cont'd)

More Complex Designs

Transformative Design

Transformative Framework

Convergent, Sequential, or Embedded
Mixed Methods
Design

Interpretation

Multiphase Design

Overall
Program
Objective

Study 1:
MM, QUAL,
or QUAN

Informs

Study 2:
MM, QUAL,
or QUAN

Informs

Study 3:
MM, QUAL,
or QUAN

How do we notate mixed methods research?

Notation	What It Indicates	Example	Key Citations
Uppercase letters	Prioritized methods	QUAN, QUAL	Morse (1991, 2003)
Lowercase letters	Lesser priority	quan, qual	Morse (1991, 2003)
+	Convergent methods	QUAN + QUAL	Morse (1991, 2003)
→	Sequential methods	QUAL → quan	Morse (1991, 2003)

Notation (cont'd)

Notation	What It Indicates	Example	Key Citations
()	Embed within a design or framework	QUAN(qual)	Plano Clark (2005)
→←	Recursive	QUAL→←QUAN	Nastasi et al. (2007)
[]	Study within a series	QUAL → [QUAN + qual]	Morse & Niehaus (2009)
=	Mixing purpose	QUAN → qual = explain results	Morse & Niehaus (2009)

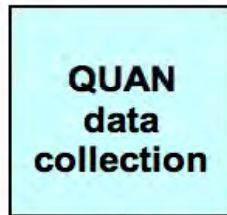
How do we visualize the procedures in mixed methods research (Convergent Design)?

Procedures:

- Select 48 participants who self-identify as depressed.
- Survey measures: ratings of depression status, demographics, other health measures.

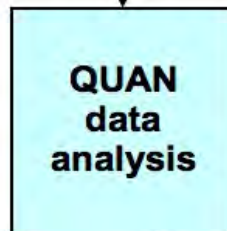
Procedures:

- Descriptive statistics
- Group comparisons



Products:

- Numerical item scores



Products:

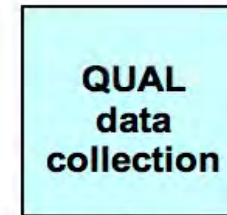
- Classification of whether depression ratings converge
- Means, SDs
- Significance

Procedures:

- Select same 48 participants.
- Conduct semistructured interviews.

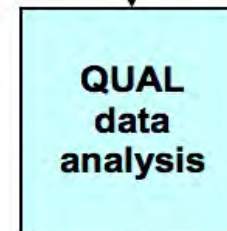
Procedures:

- Constant comparative thematic analysis



Products:

- Transcripts



Products:

- Four major themes
- Typology of patient perceptions

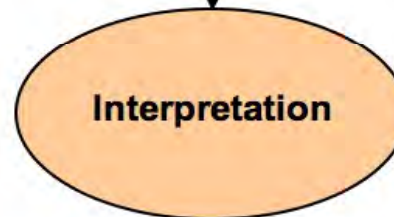


Procedures:

- Cross-tabulate qualitatively derived groups with quantitative variables.

Products:

- Matrix relating qualitative themes to quantitative variables



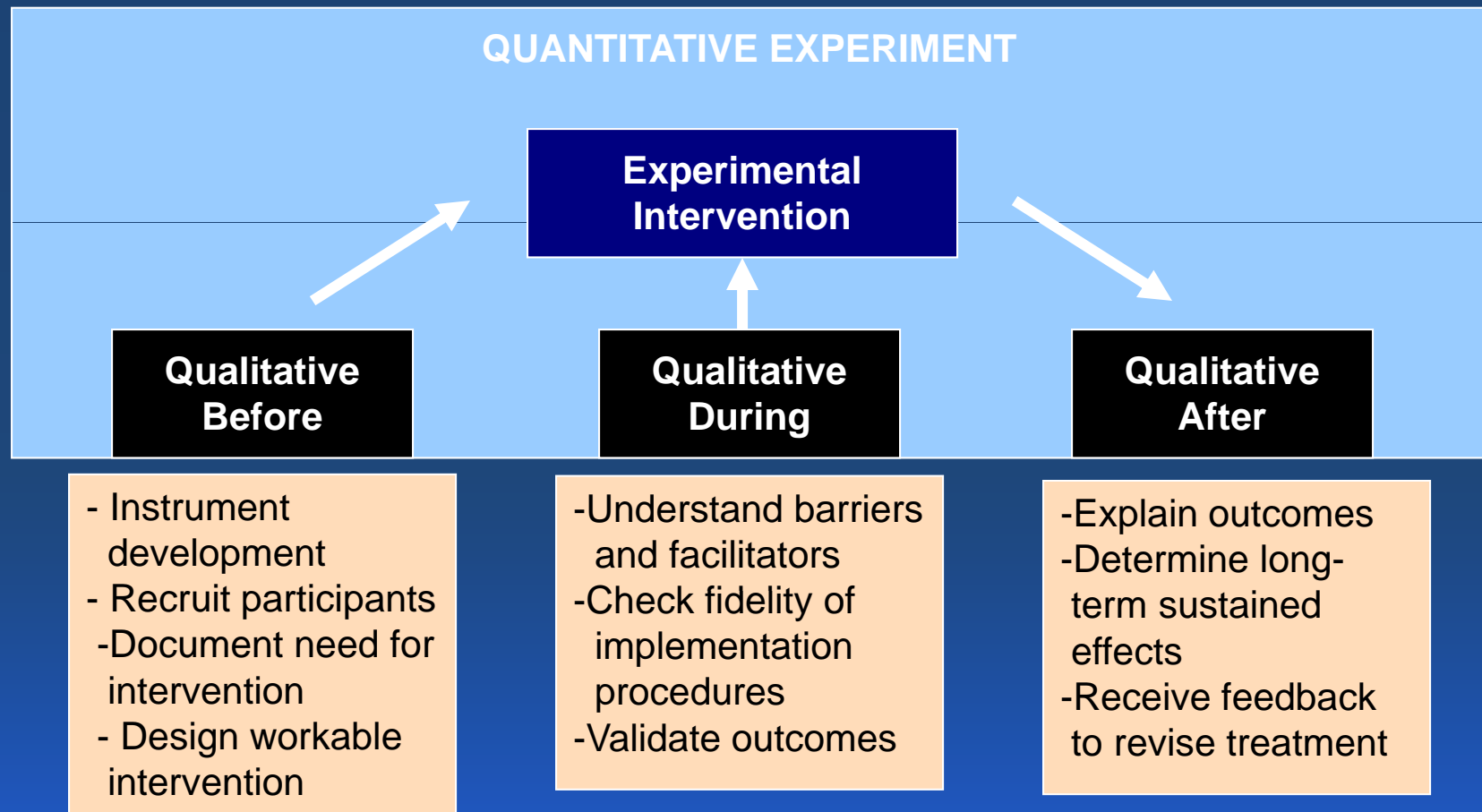
Procedures:

- Consider how merged results produce a better understanding.

Products:

- Discussion

How might qualitative data be used in an intervention trial?

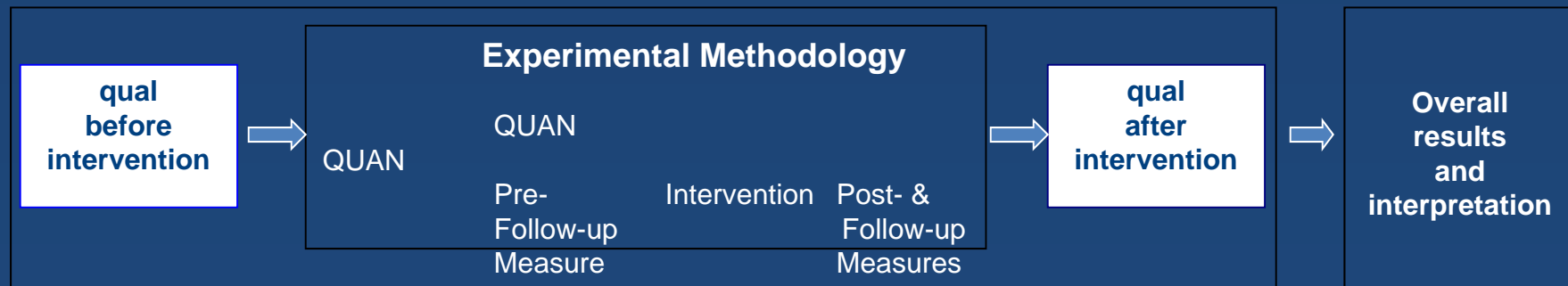


Source: Adapted from Creswell, J. W., Fetters, M. D., Plano Clark, V. L., & Morales, A. (2009). Mixed methods intervention trials. In S. Andrew and E. J. Halcomb (eds.). *Mixed Methods research for nursing and the health sciences*, pp. 161-180. West Sussex, UK: Blackwell.

Visualize procedures in an Embedded Design

(Rogers, Day, Randall, & Bentall, 2003, study to improve the management of anti-psychotic medication)

Flow of the experiment 



Procedures:

- One-on-one semi-structured interviews
- Thematic analysis

Products:

- Transcripts
- Developed intervention treatment

Procedures:

- Three groups: control group, compliance Intervention group, alliance intervention group – group comparisons
- Outcome measures: 1) attitudes toward medication 2) adherence to treatment 3) avoidance of relapse
- DAI measure completed 3 times (pre, post, & follow up)

Products:

- Numerical item scores
- Change scores
- Test statistics

Procedures:

- One-on-one semi-structured interviews – exiting the trial, participants from two experimental conditions;
- Thematic analysis

Products:

- Transcripts
- Themes and quotes

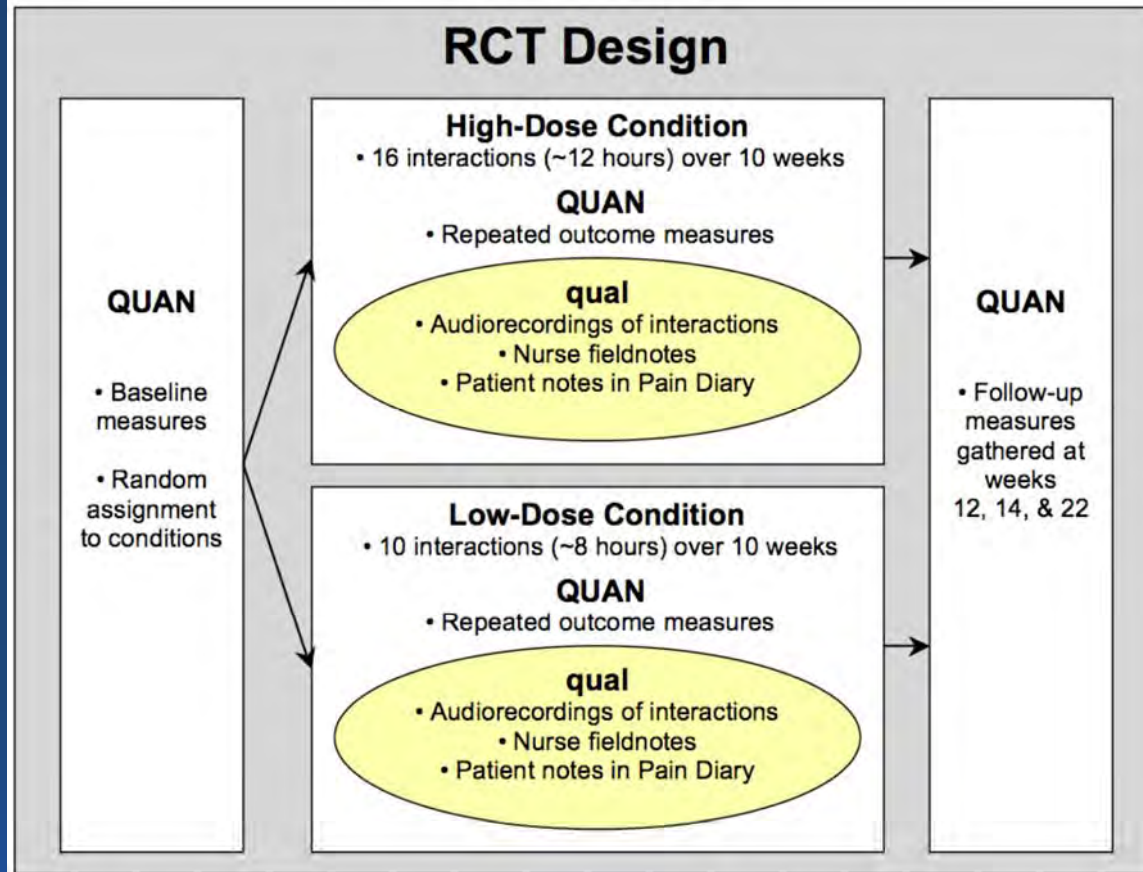
Procedures:

- Discuss treatment effectiveness
- Discuss themes in context of interventions and outcomes

Products:

- Discussion

Figure 2. The data collection methods used in the current pain management study



NOTE: QUAN = quantitative data collection; qual = qualitative data collection; Uppercase letters indicate primary priority; Lowercase letters indicate secondary priority

Another Embedded Design visual

Plano Clark, V. L., Schumacher, K., West, C., Edrington, J., Dunn, L.B., Harzstark, A., Melisko, M, Rabow, M. W., Swift, P. S., Miaskowski, C. (under review). *Practices and tensions from embedding an interpretive qualitative approach within a randomized clinical trial.*

An Explanatory Sequential Design visual

1

Design and Implement the Quantitative Strand

2

Use Strategies to Follow From the Quantitative Results:

- Determine which quantitative results need to be explained
- Use these quantitative results to design the qualitative phase

3

Design and Implement the Qualitative Strand

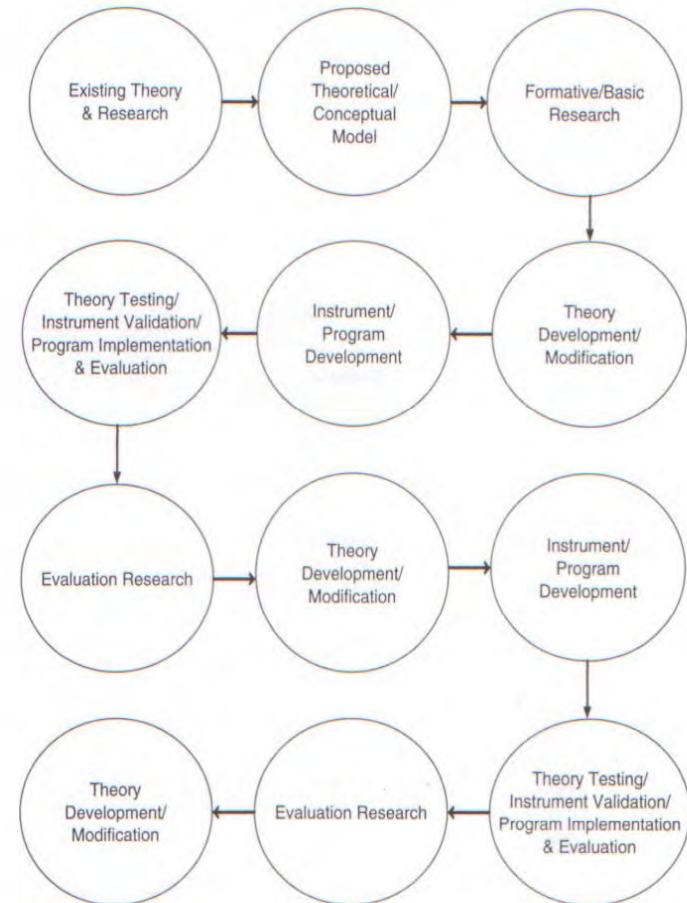
4


Interpret the Connected Results

**A multiphase design
example
(Nastasi, Hitchcock,
Sarkar, Burkholder,
Varjas & Jayasena, 2007)**

Study of mental health
interventions for youth
in Sri Lanka

Figure 1
Mixed Methods in Intervention Research Process: Theory to Adaptation



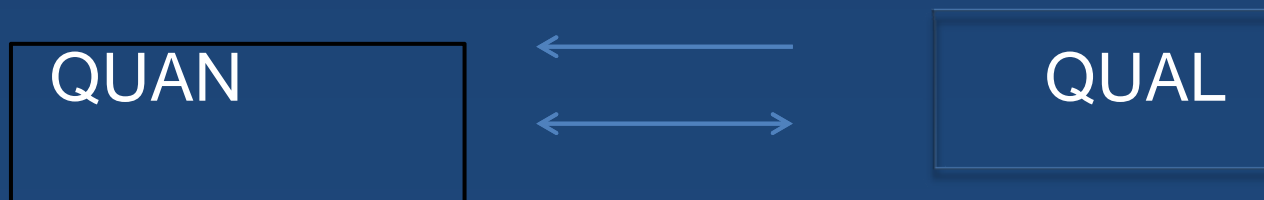


What designs would I recommend for implementation/dissemination research?

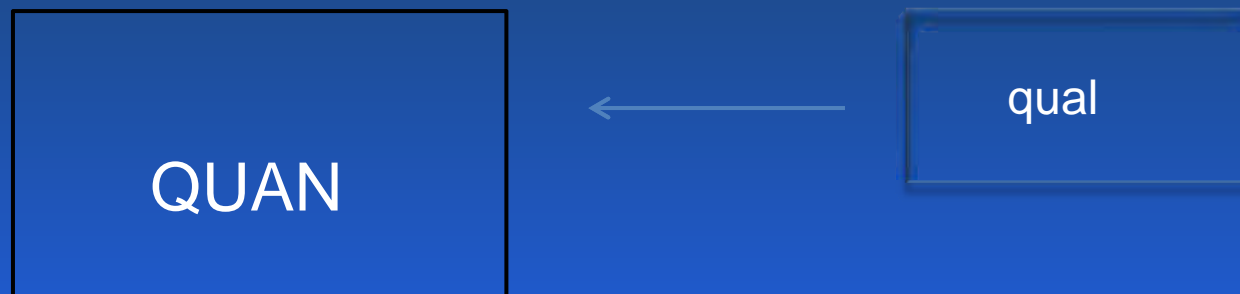
- Embedded design
- Explanatory design
- Multiphase design
- Why?
 - Builds on quan tradition (RCT)
 - Gives priority to quan approaches
 - Is publishable

How is mixed methods being shaped in the health sciences?

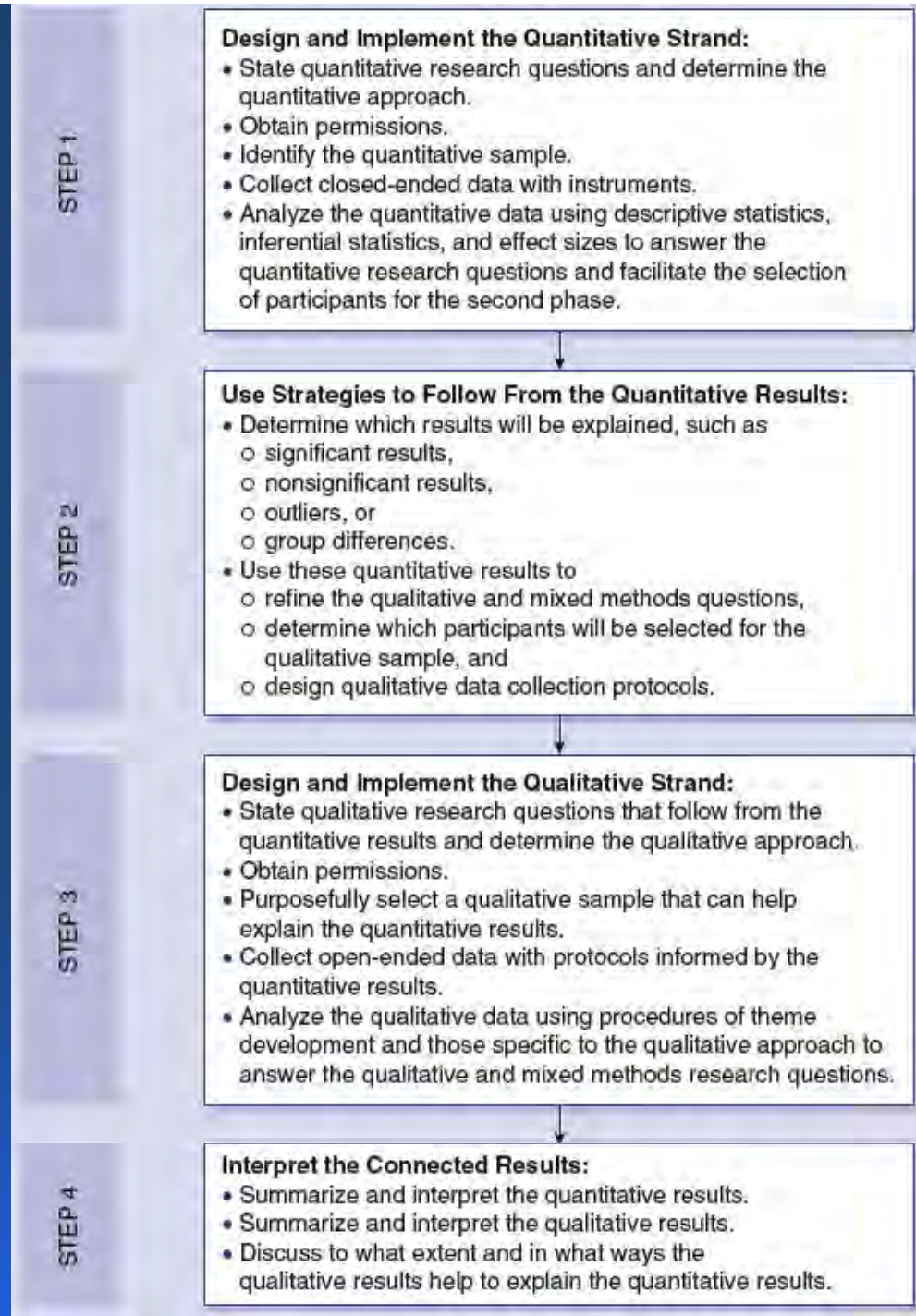
Mixed Methods in Social Sciences



Mixed Methods in the Health Sciences



What detailed procedures would I recommend? (Explanatory Sequential Design)



How would I visualize “integration” in the mixed methods designs?

Integration

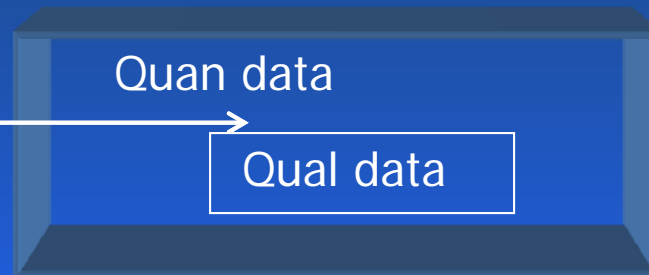
Converge data:



Connect data:



Embed the data:





How would I state a mixed methods research question (or study aim)?

- **Method focus (Explanatory Sequential Design)**
 - In what ways do the **qualitative themes** provide an explanation for the quantitative **statistical results**?
- **Content focus**
 - In what ways do the provider-patient communication provide an explanation for the predictors of quality of health?
- **Combined (content and method)**
 - In what ways do the qualitative contextual themes about provider-patient communication provide an explanation for the statistically significant predictors of quality of health?



Regardless of methods, what is “good” science?

- Rigorous
- Systematic
- State-of-the-art
- Easy to understand and apply
- Yields useful information

How has mixed methods expanded in the health sciences? Journal evidence

ORIGINAL RESEARCH

Population-based health promotion perspective for older driver safety: Conceptual framework to intervention plan

Sherriene Classen
Ellen DS Lopez
Sandra Winter
Kesia D Awad
Nita Fierne
Cynthia W Garvan

Abstract: The topic of motor vehicle crashes among the elderly is dynamic and multi-faceted requiring a comprehensive and synergistic approach to intervention planning. This approach must be based on the values of a given population as well as health statistics and assessed through community, organizational and policy strategies. An integrated summary of the predictors (quantitative research), and views (qualitative research) of the older drivers and their stakeholders, does not currently exist. This study provided an explicit socio-ecological view explaining the interrelation of possible causative factors, an integrated summary of these causative factors, and empirical guidelines for developing public health interventions to promote older driver safety. Using a mixed methods approach, we were able to compare and integrate main findings from a national crash dataset with perspectives of stakeholders. We identified: 11 multi-causal factors for safe elderly driving; the importance of the environmental factors - previously underemphasized in the literature - interacting with behavioral and health factors; and the interrelatedness among many socio-ecological factors. For the first time, to our knowledge, we conceptualized the fundamental elements of a multi-causal health promotion plan, with measurable intermediate and long-term outcomes. After completing the detailed plan we will test the effectiveness of this intervention on multiple levels.

Keywords: safe elderly driving, mixed-method approach, public health model, intervention plan, health promotion

Clinical Interventions in Aging
2007; 2(4) 677-693

Perspective

Advancements in Contemporary Physical Therapy Research: Use of Mixed Methods Designs

Lauren Rauscher, Bruce H Greenfield

The purpose of this article is to advocate for the use of mixed methods designs in contemporary physical therapy research. Mixed methods designs are used for collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies to both explain and explore specific research problems, thereby enriching the breadth and depth of understanding phenomena. These designs are particularly well suited for physical therapist researchers to reveal the complexity of disability, rehabilitation, and recovery processes. Although contextual factors influence a person's health condition and recovery, they remain conceptually less understood and underexplored by physical therapist researchers. To address this gap, the authors describe various combinations of quantitative and qualitative methods and data within a single study or set of related studies and the decisions that underlie the uses of these combinations. They include examples from current physical therapist research and applications from the International Classification of Functioning, Disability and Health (ICF) model. They argue that the rigorous application of quantitative and qualitative methods and data can propel physical therapist research and practice forward by stimulating new research questions, creating a holistic understanding of patient injury and rehabilitation, and contributing to innovative, complex treatment interventions.

L. Rauscher, PhD, is Assistant Professor (Sociology), Department of Human Development, California State University-Los Angeles, Long Beach, California.

BH Greenfield, PT, PhD, CCS, is Assistant Professor, Division of Physical Therapy, Department of Rehabilitation Medicine, Emory University School of Medicine, 1441 Clifton Rd NE, Atlanta, GA 30322 (USA). Address all correspondence to Dr Greenfield at: bgreenfield@emory.edu.

[Rauscher L, Greenfield BH. Advancements in contemporary physical therapy research: use of mixed methods designs. *Phys Ther* 2006; 86(9):1001.]

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Journal of Traumatic Stress, Vol. 22, No. 6, December 2009, pp. 612-621 (© 2009)

The Application of Mixed Methods Designs to Trauma Research

John W. Creswell

Department of Educational Psychology, University of Nebraska-Lincoln, Lincoln, NE

Wanqing Zhang

Department of Health Services Research and Administration, College of Public Health, University of Nebraska Medical Center, Omaha, NE

Despite the use of quantitative and qualitative data in trauma research and therapy, mixed methods studies in this field have not been analyzed to help researchers designing investigations. This discussion begins by reviewing four core characteristics of mixed methods research in the social and human sciences. Combining these characteristics, the authors focus on four select mixed methods designs that are applicable in trauma research. These designs are defined and their essential elements noted. Applying these designs to trauma research, a search was conducted to locate mixed methods trauma studies. From this search, one sample study was selected, and its characteristics of mixed methods procedures noted. Finally, drawing on other mixed methods designs available, several follow-up mixed methods studies were described for this sample study, enabling trauma researchers to view design options for applying mixed methods research in trauma investigations.

Post a Rapid Response or Read The Bottom Line: www.ptxpress.org

Using mixed methods to develop and evaluate complex interventions in palliative care research

Palliative Medicine
25(8) 748-757
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DOI: 10.1177/0269216311417919
pmj.sagepub.com


Morag C Farquhar *General Practice and Primary Care Research Unit, Department of Public Health & Primary Care, University of Cambridge, Institute of Public Health, UK*

Gail Ewing *Centre for Family Research, University of Cambridge, UK*

Sara Booth *Palliative Care Team, Addenbrooke's Hospital, Cambridge University Hospitals' NHS Foundation Trust, UK*

Abstract

Background: there is increasing interest in combining qualitative and quantitative research methods to provide comprehensiveness and greater knowledge yield. Mixed methods are valuable in the development and evaluation of complex interventions. They are therefore particularly valuable in palliative care research where the majority of interventions are complex, and the identification of outcomes particularly challenging.

Aims: this paper aims to introduce the role of mixed methods in the development and evaluation of complex interventions in palliative care, and how they may be used in palliative care research.

Content: the paper defines mixed methods and outlines why and how mixed methods are used to develop and evaluate complex interventions, with a pragmatic focus on design and data collection issues and data analysis. Useful texts are signposted and illustrative examples provided of mixed method studies in palliative care, including a detailed worked example of the development and evaluation of a complex intervention in palliative care for breathlessness. Key challenges to conducting mixed methods in palliative care research are identified in relation to data collection, data integration in analysis, costs and dissemination and how these might be addressed.

Mixed Methods in Health Psychology

Theoretical and Practical Considerations of the Third Paradigm

E. DURES, N. RUMSEY, & M. MORRIS
University of the West of England, UK
K. GLEESON
University of Bristol, UK



Journal of Health Psychology
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Los Angeles, London, New Delhi,
Singapore and Washington DC
www.sagepublications.com
Vol 16(2) 332-341
DOI: 10.1177/1359105310377537

Abstract

This article has two purposes: to examine why mixed methods is a legitimate approach particularly well suited to health psychology; and to describe the challenges inherent in conducting mixed methods research. First, arguments justifying the status of mixed methods as a third paradigm alongside solely quantitative and qualitative frameworks are discussed. Second, a qualitatively driven model of mixed methods is illustrated using

Mixed Methods for the Interpretation of Longitudinal Gerontologic Data: Insights From Philosophical Hermeneutics

Peter H. Van Ness¹, Terri R. Fried^{1,2}, and Thomas M. Gill¹

Journal of Mixed Methods Research
5(4) 293-308
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DOI: 10.1177/1558689811412973

<http://jmmr.sagepub.com>



Abstract

This article's main objective is to demonstrate that data analysis, including quantitative data analysis, is a process of interpretation involving basic hermeneutic principles that philosophers have identified in the interpretive process as applied to other, mainly literary, creations. Such principles include a version of the hermeneutic circle, an insistence on interpretive presuppositions, and a resistance to reducing the discovery of truth to the application of inductive methods. The importance of interpretation becomes especially evident when qualitative and quantitative methods are combined in a single clinical research project and when the data being analyzed are

The Role of Group Dynamics in Mixed Methods Health Sciences Research Teams

Leslie A. Curry¹, Alicia O'Cathain², Vicki L. Plano Clark³, Rosalie Aroni⁴, Michael Fetters⁵, and David Berg¹

Journal of Mixed Methods Research
6(1) 5-20
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DOI: 10.1177/1558689811416941
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Abstract


This article explores the group dynamics of mixed methods health sciences research teams. The authors conceptualize mixed methods research teams as "representational groups," in which members bring both their organizational and professional groups (e.g., organizational affiliations, methodological expertise) and their identity groups, such as gender or race, to the work of research. Although diversity and complementarity are intrinsic to mixed methods teams, these qualities also present particular challenges. Such challenges include (a) dealing with differences, (b) trusting the "other," (c) creating a meaningful group, (d) handling essential conflicts and tensions, and (e) enacting effective leadership roles. The authors describe these challenges and, drawing from intergroup relations theory, propose guiding principles that may be useful to mixed methods health sciences research teams.


What books would I suggest that you read to learn about mixed methods research?

- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Greene, J. C. (2007). *Mixed methods in social inquiry*. San Francisco: Jossey-Bass.
- Mertens, D. M. (2005). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches* (2nd ed.). Thousand Oaks, CA: Sage.
- Morse, J. & Niehaus, L. (2009). *Mixed method design: Principles and procedures*. Walnut Grove, CA: Left Coast Press.
- Plano Clark, V. L., & Creswell, J. W. (2008). *The mixed methods reader*. Thousand Oaks, CA: Sage.
- Ridenour, C. S., & Newman, I. (2008). *Mixed methods research: Exploring the interactive continuum* (2nd ed.). Carbondale, IL: Southern Illinois University Press.
- Tashakkori, A. & Teddlie, C. (Eds.) (2010). *Handbook of mixed methods in social and behavioral research* (2nd ed.). Thousand Oaks, CA: Sage.
- Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Thousand Oaks, CA: Sage.

What is dissemination and implementation research?

- Dissemination and implementation research includes identifying, understanding, and overcoming barriers to the adaptation, adoption and integration of evidence-based interventions and guidelines that previous research has shown to be efficacious and effective, but where uptake to date has been limited or significantly delayed.
 - Includes effective and efficient methods, structures, and strategies for dissemination and implementation
 - Includes topics of: health behavior change interventions, and evidence-based prevention, early detection, diagnostic, treatment, and quality of life improvement interventions

- 
- **Dissemination** is the targeted distribution of information and intervention materials to a specific public health or clinical practice audience. The intent is to spread knowledge and the associated evidence-based interventions.
 - **Implementation** is the use of strategies to adopt and integrate evidence-based health interventions and change practice patterns within specific settings.

- 
- **Exploration/Adoption** is the process of assessing the potential match between community needs, evidence-based practice and program needs, and community resources and to make a decision to proceed (or not).
 - **Dissemination** is the targeted distribution of information and intervention materials to a specific public health or clinical practice audience. The intent is to spread knowledge and the associated evidence-based interventions.
 - **Implementation** is the use of strategies to adopt and integrate evidence-based health interventions and change practice patterns within specific settings.
 - **Sustainability** is the survival and continued effectiveness of the intervention.

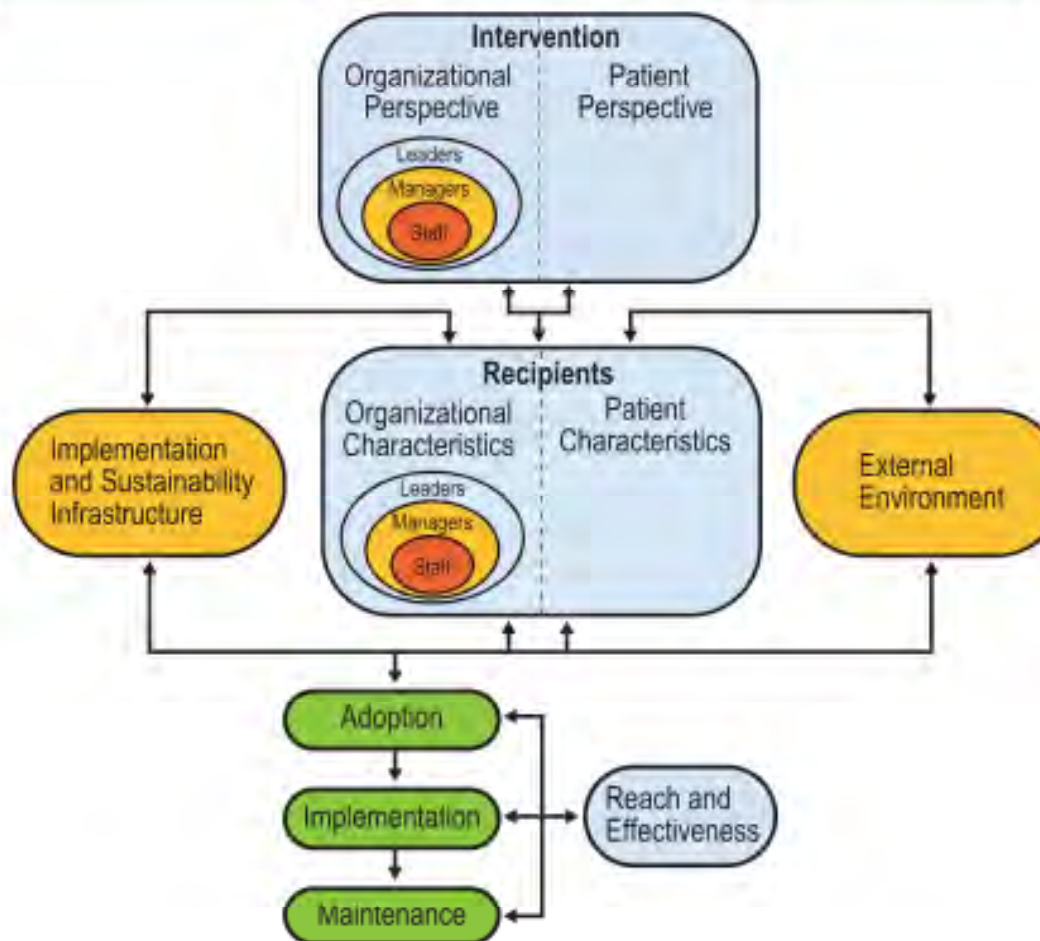
Where does D&I fall in realm of translational research? (from Khoury et al. 2007)

Research Phase	Definition	Type of Research	Example
T0	Identification of opportunities and approaches to health problem	Basic research question	Are there gene mutations associated with breast cancer?
T1	Discovery of candidate health application	Phase I and II clinical trials; observational studies	Is there an association between gene mutations and breast cancer?
T2	Health application to evidence-based practice guidelines	Phase III clinical trials; observational studies; evidence synthesis and guideline development	What is the positive predictive value of breast cancer-related gene mutations in at-risk women
T3	Practice guidelines to health practices	Dissemination and implementation research; diffusion research Phase IV clinical trials	What proportion of at-risk women are tested for breast cancer related gene mutations and what are barriers to testing?
T4	Practice to population health impact	Outcomes research; population monitoring of morbidity and mortality	Does testing in asymptomatic women reduce cancer incidence or improve outcomes?

Where does D&I fall in realm of translational research? (from Khoury et al. 2007)

Research Phase	Definition	Type of Research	Example
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T4	Practice to population health impact	Outcomes research; population monitoring of morbidity and mortality	Does testing in asymptomatic women reduce cancer incidence or improve outcomes?

The Practical, Robust Implementation and Sustainability Model (PRISM)



Example of a
model of
dissemination and
implementation
study
(Feldstein & Glasgow,
2008)

Types of Designs used in D&I Research (an incomplete list)

- Randomized Controlled Trial
- Controlled Clinical Trial
- Controlled Before and After Study
- Interrupted Time Series
- Randomized Encouragement Trials
- Practical Trials
- Regression-Discontinuity Design
- Community Based Participatory Research
- Group Randomized Trial
- Quasi-experimental design
- Adaptive Designs
- Mixed Methods
- Observational Studies
- Formative Evaluation

Types of Outcomes in D&I Studies, Part I

(Proctor et al., 2012)

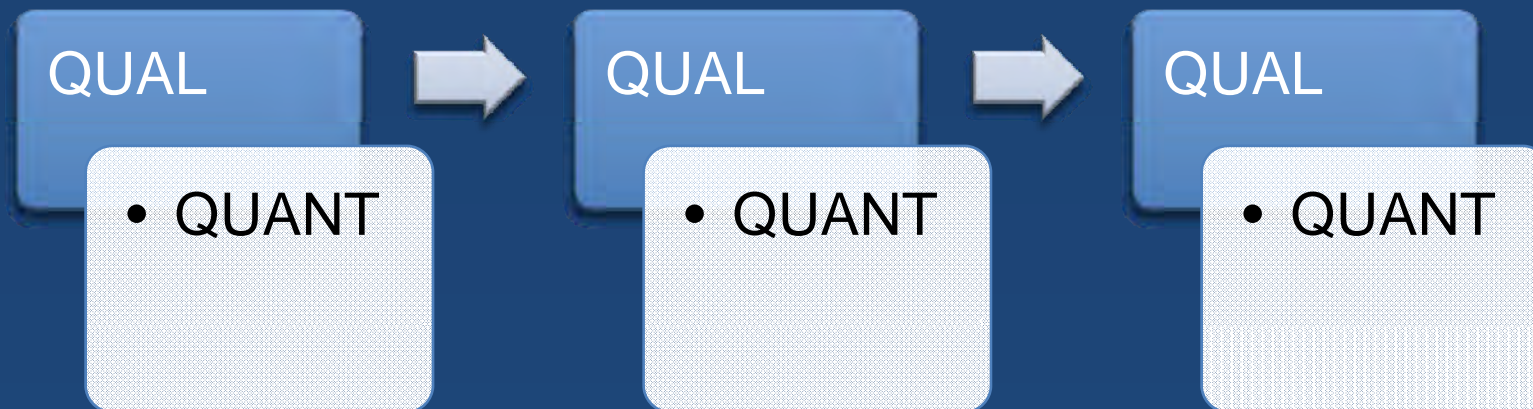
Outcome	Definition	Level of Analysis	Measurement
Acceptability	Stakeholder perception of intervention is agreeable, palatable, or satisfactory	Individual	Survey, informant interviews, administrative data
Reach	Breadth with which health information spreads	Individual	Surveys, administrative data
Adoption	intention, initial decision, or action to try or employ an innovation or evidence-based practice	Individual, Organization, Policy	Surveys, observation, informant interviews, focus groups, administrative data
Appropriateness	Perceived fit, relevance, or compatibility of practice	Individual, Organization, Policy	Surveys, informant interviews, focus groups

Types of Outcomes in D&I Studies, Part II

(Proctor et al., 2012)

D&I Outcome	Definition	Level of Analysis	Measurement
Feasibility	Extent to which practice can be carried out within an agency, setting, or population	Individual, Organization, Policy	Surveys, administrative data
Fidelity	Degree to which practice was implemented described or intended	Individual	Observation, checklists, content analyses, self-report
Cost	Expense of implementing practice	Individual, Organization, Policy	Administrative data
Penetration	Integration of practice in setting	Organization, Policy	Surveys, case studies
Sustainability	Maintenance of practice in ongoing operations	Organization, Policy	Surveys, case studies, record and policy reviews, informant interviews

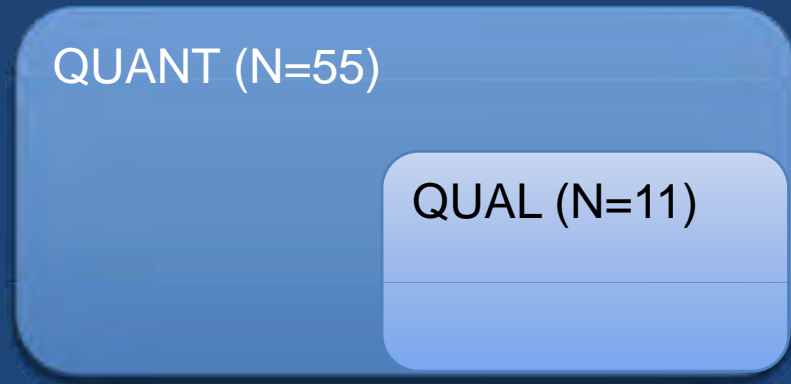
Mixed methods design: Adoption



Gioia & Dziadosz: Adoption of Evidence Based Practices in Community Mental Health

- DESIGN: Multiphase QUAL-> QUANT
- QUAL: Interviews with practitioners to understand characteristics, competencies, conditions, context, and change associated with adoption of EBPs as well as facilitating/impeding conditions at BL, 6, 12, 18, 24 months
- QUANT: Evidence-based Practice Assessment Scale determined degree of adoption and analyzed by change over time at

Mixed methods design: Implementation



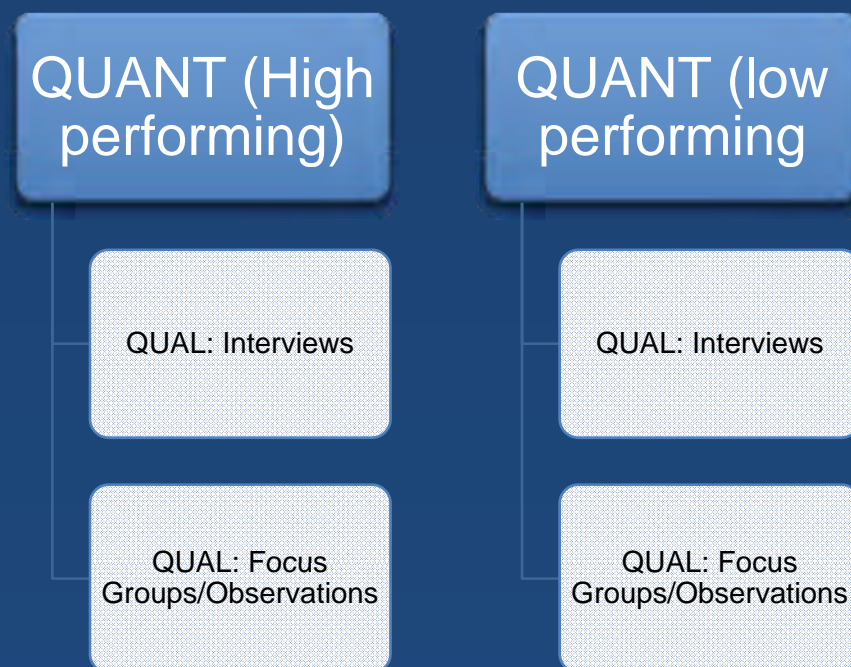
Abildso: Weight Management Program Evaluation

DESIGN: Embedded QUAL-QUANT

QUANT: Program completion rates and weight loss

QUAL (subsample): Interviews identified mechanisms for impacts

Mixed methods designs: Implementation



Besculides et al.: Identifying Best Practices for WISEWOMAN Lifestyle Intervention Programs

- DESIGN: Explanatory quant-QUAL
- QUANT data assessed high and low performance data for lifestyle intervention
- QUAL data used interviews, focus groups, and observations to determine contexts and practices

Key readings

- Abildso C et al. (2010). A mixed methods evaluation fo a 12-week insurance-sponsored weight management program incorporating cognitive-behavioral counseling. *Journal of Mixed Methods Research*, 4, 4, 278-294.
- Besculides M et al. (2006). Identifying best practices for WISEWOMAN programs using a mixed methods evaluation. *Preventing Chronic Disease*, 3, 1. Available from: URL: http://www.cdc.gov/pcd/issues/2006/jan/05_0133.htm.
- Khoury MC et al. (2007). The continuum of translation research in genomic medicine: how can we accelerate the appropriate integration of human genomic discoveries into health care and disease prevention? *Genetic Medicine*, 9, 10, 665-674.
- National Implementation Research Network. Available at: <http://www.fpg.unc.edu/~nirn/>
- National Institutes of Health. Dissemination and Implementation Research in Health (R01). 2009. Available online at: <http://grants.nih.gov/grants/guide/pa-files/PAR-10-038.html>
- Proctor EK &. Brownson RC. Measurement issues in dissemination and implementation research (Chapter 13). In Brownson RC, Colditz GA & Proctor EK(Eds.) *Disseminaton and Implementation in Health*. 2012. Oxford Press.

What would we recommend to bridge dissemination/implementation research with mixed methods?

- **For dissemination/implementation investigators**
 - Study mixed methods coming over to health sciences from social sciences – no need to reinvent the wheel
 - Consider what mixed methods designs are most useful
 - Consider skills/knowledge needed to conduct rigorous mixed methods research
 - Consider how to form teams of investigators with skills
 - Add a mixed methods researcher to your team
- **For mixed methods researchers**
 - Think in terms of detailed procedures for dissemination/implementation research
 - Keep working on how to incorporate qualitative research into intervention trials
 - Have well-delineated arguments for the use of qualitative research in the health sciences and advocate for rigorous qualitative research
 - Understand the processes of research from adoption, implementation, and maintenance and how mixed methods might be used in these phases

Overview of Mixed Methods Research in Dissemination and Implementation

John W. Creswell, Professor of Educational Psychology, University of Nebraska-Lincoln
Jennifer P. Wisdom, Associate Professor of Clinical Psychology, Columbia University
Mailman School of Public Health

Presentation for NIH Workshop: Using Mixed Methods to Optimize Dissemination and Implementation of Health Interventions, May 3, 2012, Natcher Conference Center, NIH Campus, Bethesda, MD

Appreciation to NIMH P30 P30MH090322 (PI: Hoagwood)